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THE HUMAN VOICE,

ITS PRODUCTION

AND

CULTIVATION.

AN ESSAY



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READ BEFORE THE CLASSES OF

THE NATIONAL SCHOOL OF ELOCUTION AND ORATORY

APRIL 16TH, 1891,

1414 Arch Street, Philadelphia, Pa.,

BY

GEO. B. HYNSON,

TEACHER OF VOICE CULTURE.

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1891

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TO THE  
STUDENTS  
OF THE  
NATIONAL SCHOOL OF ELOCUTION AND ORATORY,  
MY PUPILS AND MY FRIENDS,  
WHO HAVE INSPIRED MUCH THAT IS CONTAINED IN THIS ESSAY,  
AND WHO ARE RESPONSIBLE FOR ITS PUBLICATION,  
TO THEM,  
WITH WHATEVER MERIT IT POSSESSES,  
IT IS AFFECTIONATELY DEDICATED BY  
THE AUTHOR.



## PRELIMINARY OBSERVATIONS.

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HERE is no musical instrument so nicely arranged, so harmoniously adjusted, or so wonderfully formed as the great organ of speech, the human voice. Physicians and scientists the world over for centuries have studied, discussed, and wrangled, and yet, at the present day, standing as we do at the zenith of the world's civilization and learning, there is much that is dim and as yet unexplained. Physicians, arguing from a common basis, reach very different conclusions in discussing voice, as they also do in other matters; while teachers have their hobbies and the student frequently is left to grope in the dark, entangled and hindered by the maze of speculation surrounding him.

There is much that is uncertain; there is much that is willfully obscured, yet there is also much that is plain, and so philosophical that the student may comprehend, receive, and apply it. Hobbies have their uses; they start new lines of investigation and often are the forerunners of ultimate truth.

It is not my purpose here to enter into the realm of the merely speculative, but if the reader will come with me, we will investigate together and discuss a few principles, simple, natural, and practical, by the aid of which we may add culture, beauty, and power to the most wonderful of all instruments, the human voice. Let each student determine to study his own voice, carefully considering each

quality of strength or weakness, for the ability to detect a fault must precede the application of the remedy.

Much learning and scientific investigation have been spent in the effort to prove that the human voice is like some one of the musical instruments, some contending that it most resembles a flute, while others say it is a stringed instrument like the violin, and still others show its resemblance to the reed instrument. Of late an agreement seems to have been reached—that it partakes of each of them. But it would seem that we might go one step further and say that it is a great original, this “harp of a thousand strings”—that its chords were strung by the hand of Deity, and tuned to the harmonies of that sphere where there are no imperfections—no discords; that it is the perfected instrument of a perfect maker, and that the greater we render its harmonies and power, the more we magnify the name of its Author. All merely mechanical appliances must, of necessity, be more or less imperfect and they can only represent some one or more phases of human speech.

If we understood the workmanship and control of each organ; if we could produce each piece of bone, muscle, and cartilage; if we could understand the uses of and could mechanically control each function, then we should succeed in forming something that would resemble the human voice. The phonograph with all its wonderful results, serves only to reproduce more or less accurately a voice already made. It merely photographs a voice, and requires an original which it slavishly copies. Therefore the voice is the chief of instruments, the most intricate in its mechanism, and yet the most easily controlled. Its changes and variety may be infinite, and we are the masters, with our hands upon the keys. Let us, through this medium, send forth the melodies, the thoughts, and emotions that were written by the hand of Deity upon the pages of our hearts and minds.

Then, on the threshold of our work, we must determine

to investigate, expecting to find much that is dark. We may question, where the answer comes not back, and yet there is much which we shall know. There are faults which we shall remedy, and there are heights of development to be reached by the application of correct physical laws. And, too, we may accomplish much by mere imitation, without ever knowing the exact change that is undergone in the vocal apparatus. The physician regards this study from his own standpoint; let us look at it from ours, aiming at results, rather than fine-spun theories, and adopting the latter only as they help us to realize the practical.

### PURPOSES OF VOCAL CULTURE.

God has given to each of us a mind, and that mind takes on certain phases of sensation or emotion. The value of these sensations or emotions is measured chiefly by our power of communicating them. Nearly all our knowledge is gotten with reference to its communication. Whether I study law, medicine, theology, or art, I do so with reference to its ultimate expression. Now the voice is the great, the principal medium of this conveyance, consequently we realize the importance of developing and enlarging this medium, and hence, voice culture.

Sometimes we are asked why, inasmuch as Nature has given us mind, has she not given us ample power to convey the product of that mind. An infant has a mind, but it is only in embryo. It also has a power of expression fully adequate to the mind's phases. But the intellect must be trained; so must the powers of expression. It is as philosophical to say that the sculptor can carve, the artist can paint, or the mind of man reach its highest development without training, as that the human voice can portray all the thoughts and emotions of the mind and heart without any study or training. We think infinitely more than we can tell, and could we adequately picture all of our emotions we would move an audience at will.

Man's primitive condition is but little higher than any other animal. The savage has but few desires, and but few emotions. He wants food, drink, and warmth; his thoughts are confined principally to these. Having them he is satisfied, and without them he is savage. Hence, his two great thoughts are pleasure and pain. Now any animal can express these two emotions. Notice the whinny of a horse or his squeals of rage, the joyous bark of a dog or his growl, a cat's purr or its screams—all these are the natural expressions of an animal's feeling. Just so the primitive man grunts his satisfaction and growls his pain. But his tribe grows older and begins the slow and tedious march from savagery to civilization: hunting gives way to agriculture; then come the sciences, and then literature. He thinks and feels, and as he does so he forms new sounds to convey these sensations. These are taken up and modified into other combinations, and soon he has articulate speech. Then comes civilization, the triumph of mind over matter, and finally perfected language. Thoughts and feeling and language go hand in hand. They are wedded to each other; when one develops the other develops, and when one decays the other must follow.

Now when we consider that language consists in something more than mere printed or articulate words, that like eloquence, it is something more than speech; that intonations, inflections, and harmonies mean infinitely more than any aggregation of mere sound or printed matter, we see the value of the voice and of its cultivation. There is a subtilty of tone which the actor or orator uses to clothe his thought, which may move an audience to tears or to curses—more the tone than the words. How may this variety be obtained? Partly by a natural unconscious imitation of others, and partly through intelligent and systematic cultivation.

One of the purposes of cultivation is that the health of the parts thus used, by the application of the true laws of



development, may be best conserved. In order to produce our best and most resonant sounds, we must study respiration, and all of these organs are strengthened by the proper use. It is a well-known principle that all the parts of our being, physical, mental, and spiritual, develop by correct and reasonable use. The arm of labor grows sinewy and strong. In a gymnasium the skillful teacher first finds, by many measurements, where the student is weakest and sets to work to develop those parts by their use. It has been shown by experiments that if a person carries an arm in a sling for several months, without using it in any manner, it will lose its strength and the muscles become relaxed, so that it becomes powerless. Now if reasonable use develops all parts of the body, why do not the organs of speech grow stronger as we use them? The answer is obvious: they do when we use them properly. Voice is a phase of muscular activity. It may be termed vocalized breath. It is the result of certain vibrations of the air, produced by the action of the breath upon the vocal bands, modified and made resonant by the cavities of the chest, head, and mouth, and controlled by the muscles of the diaphragm and abdomen. When we add to this the molding and enunciation given by the mouth we may term it speech.

### THE INFLUENCE OF CLIMATE UPON SPEECH.

When we closely observe the languages spoken by the different peoples of the globe, we find in some more harsh and guttural sounds than in others. Those who dwell beneath sunny skies, where the blossoms are ever blooming and where frost and snow are unknown, speak in languages soft and musical, both in their elementary sounds and in their cadences and inflections. Compare the Spanish, Portuguese, and kindred tongues with the German or Russian, or even the English. The differences in climate

through its centuries of modification is greatly responsible for this difference. Inhabitants of tropical climes are more indolent than their brethren of the colder lands. Nature spreads her bounties before them. Life is not a scramble for food and shelter. As men think, they speak, and the rush and bustle of business, the rattle of the wheels of commerce, and all the jar and friction pertaining thereto finds its outlet and expression in the human voice.

Then, too, climate has its effect on the organs of speech. The people of northern climates live principally within doors, where the air is more or less vitiated and impure. Rooms ill-ventilated, full of gas or impure air are common. In southern climes the inhabitants live more in the open air and breathe it at all times unadulterated by gases or impurities, and, hence, their respiratory organs are stronger and healthier. Then, again, occupation has much to do with this. A race of men occupied in close factories or closer offices, and women and children inhabiting hot-air boxes they call rooms, from which the pure air and sunlight of heaven are rigorously excluded, who never go out-of-doors, except for a ride on a warm day, enwrapped in furs, thus neglecting sunlight, pure air, and exercise, those three requisites to good health; such a race must deteriorate physically and the organs of respiration be clogged, choked, and dwarfed for want of reasonable use.

The cold also has an influence on voice, by stiffening the muscles of the mouth, throat, and lips. A cultivation of these organs until they are perfectly flexible and pliable is necessary to correct enunciation. When the head and face are intensely cold, correct and distinct utterance is almost impossible. The muscles of the jaw are rigid; thus the mouth does not open sufficiently; the lips do not take on the proper changes of form, the throat is less flexible, and the voice is less resonant and distinct. It is only reasonable to suppose that a people who have been thus subjected for many centuries, should have incorporated some of these



qualities into their language and into articulate speech. Fortunately this is a rule where exceptions abound, and these faults and hereditary tendencies may generally be neutralized by intelligent and systematic cultivation.

## THE VOCAL APPARATUS.

Generally speaking, the whole body has something to do with the making of voice. It takes a perfect man, physically, to make a perfect voice. Health is indispensable to one who would have the best control of the organs of speech. Over-indulgence in any line, all forms of dissipation, affect some one or more of the organs that make, control, or modify speech. Every student of voice would do well to copy the abstemious habits of the best public singers. Much depends upon the position of the head and chest of a speaker when he is using the voice. The foundation of a good voice is a well-developed thorax, and the proper control of the organs of respiration.

All voice is formed in the voice box, and is produced by the vibration of the vocal bands; it may be controlled, molded, and modified elsewhere, but it is made here. In ordinary breathing the bands are relaxed, allowing the air to pass in and out freely. They maintain this same relaxed condition, also, in a whisper, then the air being more forcibly exhaled is molded into words, just as vocalized sounds are. When we think of speaking the bands assume a tensioned condition, and come close together in a parallel position. The expulsion of the air from the lungs sets these bands vibrating, and the result is a succession of vibrations formed into sound waves which, with their moldings and modifications, we call speech. The vocal bands are just below the "Adam's apple," in the throat, so that any one may locate them. The voice box is a funnel-shaped opening placed at the top of the windpipe

(trachea), and opens into it. This is divided into the bronchi and bronchial tubes, with are connected with the lungs. The lungs are those large balloon or sponge-like bodies that fill the greater portion of the thoracic cavity. They lie close in around the ribs, and are protected by them. They constitute the bellows or the wind-chamber, and their correct control is indispensable to the correct forms of voice production. But the inhalation and exhalation of air must be controlled. Too much breath must not be expended, but exactly enough to produce the tone the mind contemplates. This requires the utmost precision and nicety of control, and hence we study the muscles that exercise this influence. All the muscles of the diaphragm, abdomen, and thorax are employed in this work, and their particular functions will be considered in a later chapter under "Breathing." Then, too, voice receives many modifications by all the muscles and parts with which it comes in contact, all helping to give resonance, volume, and character to it. For a perfect voice absolute harmony of all the parts concerned is necessary, and hence we may say that nearly all parts of man should be considered under the head of "vocal organs."

## BREATHING.

There is no one branch of voice culture that should receive more careful consideration than breathing; because breath is voice when vocalized, and speech when modified and molded, and hence upon its control must depend the control of the voice. The student is wont to neglect this branch of work, because he must wait patiently to see the results which manifest themselves later on in the voice. Let the student first accustom himself to breathing through the nose. This is the normal way for animals to breathe, and is the only healthy manner of breathing. The savage who lives principally in the open air, and whose life is one

of activity, invariably breathes through the nose. All animals but man breathe in the same manner. Some of them, indeed, nearly all of them, do not know how to breathe through the mouth. Experiments have been frequently tried, stopping up the nostrils of animals, and they prove that if the experiment is not discontinued the animal dies from suffocation. Drivers often subdue unruly horses by stopping up the nasal passages with the hand. The animal is frantic till the hand is removed. The inference is, then, that the normal breathing for animals is through the nose.

There are several strong reasons for this form of breathing. The nose is a wonderful instrument, a study in itself, and we find by close observation that it was designed to serve certain specific purposes. It is the olfactory organ, and when its passages have become clogged and less delicate and sensitive from want of use, the power of smell is affected thereby. The nose, internally, is one of the warmest parts of the body. Nature has designed it so that it may give warmth to the cold air on its way to the lungs. Now, a person taking the air through the mouth allows it to enter the lungs, passing over the tender vocal machinery, in a cold condition. Then the nose is so arranged in its passages, folds, and fibres that all impurities, such as dust, are strained from the air, causing it to enter the lungs in a pure condition. One who breathes through the nose in a dusty atmosphere for a short time will notice the impurities which gather in the nasal passages. Then, too, if the air is too dry, the capillaries give off moisture, and thus make the air more suitable for entering the lungs. But suppose the air is too moist! What then? Why, these same capillaries absorb part of this moisture, keeping the air in as perfect condition as possible. There is enough in the study of the nose, in its uses, from the standpoint of voice or health, to prove the existence of some all-wise Maker.

A careful observation of those we meet on the street will show that the great majority of people breathe with the mouth slightly open, and through it. People have this habit who are totally unconscious of it. Now, science tells us that here, as elsewhere, if we do not use the nose it will lose to some extent the power of performing the functions for which it was designed. When man disdains Nature's gifts she withdraws them. Therefore, if we make the mouth do the work of the nose, the latter organ will become clogged and its passages stopped, and will lose its resonance and become the legitimate prey of disease. Many colds and diseases of the head and nose are brought about by the disuse of these parts.

Avoid using the voice in the open air, when the atmosphere is damp or cold. Out-door serenades, sleighing songs, and street conversation in cold weather should be indulged in only by those who do not value their voices. For when we are speaking or singing the organs are in a state of activity, and, consequently, are warm and sensitive; now if we pour in on them a stream of cold or damp air they will be affected thereby. Do not exercise the voice when the air is too cold or impure, and after reading, public speaking, or singing be very careful of the vocal organs till they have recovered from their labor and resumed their usual condition. These precautions are necessary if we value voice; for the most precious things in life are the ones we guard most jealously. A street vendor who barter his wares from door to door, has a voice sufficient, without cultivation, for his purpose, but he who deals in the products of the human mind, and the varying phases of the human soul, needs a more varied, refined, and accurate method of expression. A few gallons of paint, a brush, and a tramp may paint a barn, but these would hardly produce an "Angelus." Let us, then, cultivate and develop the voice, taking the utmost care of it, remembering that, like other instruments, improper use,



and want of proper attention will lessen its value. How careful we are of a fine piano, or a rare old violin, because of their value; let us remember that the vocal machinery is of far greater value, and then we shall perhaps care for it accordingly.

This work should be begun in childhood, first by teaching the young to breathe properly. The first requisite is to impress the mind with the necessity of using the nose for this purpose. We may so impress the mind with this that after a time it will be impossible for us to sleep when the nasal passages from any cause are stopped, and we are compelled to breathe through the mouth. All diseases of the respiratory organs work downwards, and many a case of consumption could be traced back to a cold in the head or throat, brought about, in its inception, by an improper use of these parts, or by their disuse.

A very great deal depends on our manner of breathing, or the method employed in the use of the muscles of the diaphragm, thorax, and abdomen in respiration. However great the divergence of opinion on this matter it is one we cannot shun, and we must meet and consider it from the standpoints of both science and experience.

We are told by some that there is but one correct form of breathing, modified or exaggerated to suit the occasion, and that is the natural or abdominal method. This method is characterized by a protusion of the abdomen, and the downward movement of the diaphragm during the act of inspiration, and a recession during expiration. This, certainly, is the easiest form of breathing, but it is not the most effective when a considerable quantity of air is to be controlled. When we speak of natural breathing we must take into consideration the purposes for which the breath is taken. We breathe at different times for different objects; at one time the purpose is simply to supply the lungs with oxygen, at another time, vocalization is the object. Then in one moment we inhale for the purpose of

using the air in the lungs, and then give it out because it has served our purpose, and we are through with it; at another time we inhale when the object in view is exhalation, and the exhalation for the purposes of sound. Hence, there are two forms of breathing, active and passive; the former is employed when we would control a great amount of air in respiration, and the latter when the breathing is merely to sustain life. In abdominal breathing the thorax is somewhat lengthened in inhalation, thus allowing a slight expansion in the extreme lower regions of the lungs, at the same time the downward action of the diaphragm and the protrusion of the abdomen draw the ribs down and in, so the only increase in thoracic cavity is in its length. Now this expansion occurs where there is comparatively little lung tissue, and there is a contraction where there is most. Any one who has examined a pair of inflated lungs will have noticed that the expansion is almost entirely in circumference, and not in length, or, in other words, the greatest number of air cells is in the middle, and not in the extreme lower regions. Since it must be conceded that that form of breathing which allows the greatest expansion where there is greatest lung tissue is the correct mode, we must conclude that this expansion must take place in the middle or lower thoracic region. Therefore, as we have seen that abdominal breathing lengthens the thorax, and at the same time draws down and in the bony structure around the lungs, thus decreasing their cavity of expansion, we must conclude that this form of breathing is not most effective for the purposes of speech and song.

The idea should not be to force out the chest by the filling of the lungs, but rather to relieve them of unnecessary strain, by throwing out the chest, by its own muscles, and allowing the lungs to fill quickly and easily, by having made room for their expansion. Now the chest has muscles powerful and ample to raise and expand it, just as

the arm has power to control its movements. If we wish to observe the strength of the muscles of the thorax and abdomen, notice their spasmodic action in violent coughing or vomiting. There we have the strong inward action, expelling the air from the lungs explosively and exhausting them in a single effort. Now for the purposes of speech or song the action should be the opposite of this, the lungs should be kept inflated, the chest expanded, and only sufficient breath given out to make the sound desired. It takes a certain quantity of breath to produce a pure tone, and the least additional amount render the tone impure and injures it. Then the idea of thoracic breathing is not to pump in a great volume of air and pump it out again, but rather to control it in the lungs, giving out just enough for voice and no more, and thus keeping the chest full and firm, which will give greater resonance and unity to sound.

It does not require much breath to make voice. To prove this, take a deep inspiration and give out the breath slowly through the mouth until the lungs are exhausted, then inhale again and vocalize the sound and we shall find that the latter may be prolonged just as long as the former. It requires a far greater amount of breath to make a whisper than it does to produce vocalization.

Dr. Lennox Browne compares the movement of the ribs to a bucket handle, the more they are raised, the more they are thrown out. Therefore the only way to expand the thorax is to raise the ribs by the external muscles connected with them. These muscles expand the ribs till the chest assumes a tension something like a tightened drum-head. At the same time there is a slight depression of the diaphragm. Then comes the act of expiration, for the purpose of voice making; now the diaphragm contracts still more and presses the abdomen still further downward. But the muscles of the abdomen are resisting forces and their tendency is upward, so the diaphragm contracts strongly around the abdomen, and slightly overcomes its

upward movement. This firmness of base gives character and resonance to voice.

This chest expansion may take place either in the upper or in the lower regions, and where it occurs there the lungs will fill. When there is any constriction of the waist, the lungs are pressed upward and their lower portions are not allowed to properly expand. When this occurs, the breathing is in the upper thoracic regions, because this is the best and only form of breathing applicable under the conditions. The proper and healthful way is to remove the constriction and allow the whole lung to expand. Now the true mode of breathing is the middle or lower thoracic breathing, because by it we get the most expansion around those parts where the most lung tissue lies. Of course no one of these forms can exist independently of the others, but the fact that some one of them predominates, gives rise to the difference in terms.

Speaking and singing are active processes, and as the nerves are tensioned and the whole body active, the facial expression more intense, and the gestures more vigorous as the audience is larger and the thought more intense, so the chest should be active and vigorous, or, in other words, adapted to the demands of occasion.

Let the student keep this in mind, that in speaking or singing or in practicing breathing exercises, he should fill the lungs from top to bottom and from centre to circumference, and the form of inhalation which is most conducive to this is the correct method.

Do not throw the shoulders up nor the back forward, but teach the chest to expand by the raising and expanding of the ribs. When the chest is thus expanded, by placing the hands on it and giving a forcible sound, we may distinctly feel the vibrations. Practice this till you can distinctly discern these vibrations in any part of the thorax which covers the lungs, and then you may be certain of chest resonance. Athletes frequently throw the



chest out in this manner while boxing, in which case the blow has no more effect than pounding a tightened drum-head, but a blow on a relaxed chest might do a great deal of harm, for in that case the walls of the chest lie against the lungs in a relaxed condition.

Avoid a stooping position or any drooping of the shoulders. This cramps the upper portions of the lungs and keeps them from expanding properly. Bear this in mind, that in the disuse of the lungs disease is the penalty we must pay. Practice diligently breathing exercises, keeping two objects in view, lung expansion and breath control. The books abound with these exercises, and we can make and adapt exercises to suit these ends. Avoid many explosive sounds, as these only irritate and may permanently injure the respiratory organs. Practice control of breath exhalation; see that it is as smooth and regular as the note of an organ. Fill the lungs full, then exhale so slowly and regularly that the escaping breath will not cause a candle flame to flicker. This exercise will require two efforts, first keeping the breath back, and in the end forcing the air out by strong muscular contraction.

### THE CORRECT BASIS FOR VOICE.

Of course, to make a correct tone, many different things are to be taken into consideration. It depends upon the proper and united action of the different parts of the whole being—upon the control of the muscles of the throat and the muscles of respiration. First, all forms of vocalization should be made without friction. It takes many years of use to wear out a watch, but a little dust among the works will stop it, so voice should be made without any great effort, without friction. It is sometimes said that voice may be made indefinitely without waste and without tiring its producer, but this is one of those dangerous half-truths. Voice is muscular activity and this activity produces waste.

Something cannot be gotten from nothing, and it takes considerable strength to produce a large voice for any length of time. The truth is that the proper use of the voice takes the strain off of the throat and distributes it all over the body, where it belongs. The throat and its different parts should not be more exhausted than other parts of the vocal machinery, for Nature has constructed a perfect machine, and when there is harmony in its operations each part will be equally affected. The throat, then, was made to perform certain functions, and it is only when it is mis-used or over-taxed that it rebels.

There is a school of elocution which claims to give the student such instruction that he may acquire such control of the voice that it will be as strong and flexible in old age as in youth. This is a fallacy. An old man may have a good voice, but it will be an old man's voice. There would be a lack of harmony if an old man should come tottering on the stage, his gait unsteady and his gestures tremulous, and should begin speaking in a round, clear, firm tone such as a young man would use in vigorous manhood. As in old age we lose to a great extent control of the body, so that it has not the strength and vigor of our earlier manhood, the voice will be affected by and will conform to these conditions. Therefore, the only thing a student may hope to do is to make the best voice possible under the existing conditions. Nature has intended that the physical being should be the outlet or medium of expression both of *its own* phases and of the sensations of the mind and soul within. If we are joyous or excited the first impression is made on the mind; now, while in this nervous state, the mind thinks and acts with lightning-like rapidity. This movement is also conveyed to the body; the nerves are strung, the muscles tensioned. We move quickly, our gestures are quick and spasmodic and decided. Now, all these sensations are conveyed to the vocal machinery, and as the whole man is tensioned, so the vocal bands are tensioned

and this throws the voice up, and hence this is the usual form it takes in excitement. It will be observed that the impression is first made on the brain, and then to the body, and through it to the voice. Hence, we think before we act, and act before we speak, and this is why gesture usually precedes voice, because the emotion manifests itself first in the body and through it to the vocal bands, or by speech. Consequently, in sadness, awe, reverence, and all mental depression, the body, by its relaxation and sluggish movements, adequately pictures this and conveys its impressions to the voice which relaxes the vocal bands and throws the voice down on a low pitch and gives it a deliberate, sluggish movement. Therefore, the state of the mind and the condition of the whole physical being affect the vocal apparatus and its product. Then may we not advance a step and say, it takes a perfect man, mentally, morally, and physically, to make a perfect voice?

The healthy man is the one who best resists an epidemic, and so the healthy vocal machinery, brought about by correct forms of exercise, will resist minor forms of diseases. Conscientious teachers and doctors may be of great assistance to each other in this work.

Very often the pharynx and all the muscles of the throat are contracted and there is produced what may be termed a throaty tone. This is especially true when we attempt to give a tone above our usual range. We usually use our voices in speech near our lowest notes, hence the higher ones are less familiar and more difficult. Often, too, the sounds are made abruptly or irregularly in outline. These forms should be avoided. The mind influences voice and conveys its impressions to it instantly and naturally. Consequently when we imagine a tone will be difficult, the impression is conveyed to the voice and manifests itself in it. Two things are necessary, first placing the vocal organs in proper position, and then by making the sound many

times, convince the mind that it is easy and thus the strain will be taken away from the throat.

Open the mouth and throat well, the mouth up and down rather than broadly. Throw the chin down and out. Do not drop the jaw at an acute angle or toward the neck, but rather at an obtuse angle, down and out. This relieves the throat, and gives us mouth and throat cavity. Take a sound on an easy pitch. Start with it clear and smooth, now run up and down with it on a slide without change of the vocal organs, except the tension and relaxation of the vocal bands, keeping the mouth in the same position, and the result will be as clear a note on the higher and lower pitches as in the middle. We shall be surprised to find with what ease all the notes of the different pitches within our range may be made.

It frequently occurs that a speaker's voice, although pleasant and musical, may be exceedingly monotonous and almost unbearable, because of its lack of variety.

The speaker may keep on one key, may give the same amount of force or the same inflections throughout. Speech should consist in light and shade. One form of voice calls for its relief or opposite, and thus such variety as pleases the ear may be given, and at the same time the varying and almost infinite phases of thought and emotion may be adequately portrayed. Most persons are unaware of this monotony, and some, seeing it, make the matter worse by attempting to remedy it. The true course is to resolve speech into its original elements and study these. Taking for granted that purity, flexibility, and resonance are to be the prime objects at all times, let us see how this great variety may be obtained. First, then, there are two things to be considered—force and movement. The degrees of the former we cannot measure, and the combinations of the latter are almost infinite.

Let us first notice that there are but three general movements of the voice, and all others are combinations of



these. The musical is that form where there is no inflection, no change of pitch while one separate sound is being made. It is that sound when the vanish is sustained on the same pitch as the body of the tone.

This musical sound, whether the note is short or sustained, may always be found by singing one of the musical notes. Taking one of these for our guide, we may always find the musical movement. Suppose we take "do" for our musical keyword. There is no person, however ignorant of music, who tries to sing the notes of the scale who will often inflect them.

The inflected tones occur when the movement is not on the musical, but is either upward or downward. To find a rising inflection, ask a question; ask that question which we use when a person is not understood: "Eh?" and our voices take the upward inflection. Now answer this question positively, and the answer will be the falling inflection. Notice your inflection when you answer emphatically, "No!" All other forms are mere combinations or exaggerations of these. Construct a table of sounds of different shapes, of different pitches, different degrees of force, changes in inflections, and by combining these in all possible ways we may secure such variety as only stops short of the infinite. Inflections are produced by a slight tension or relaxation of the vocal bands on the vanish of a tone, the body of the tone remaining on the musical. A slide is when the body of the tone, rather than the vanish, is carried upward or downward, and usually for some considerable distance.

Many good results are often obtained by mere imitation. When we imitate we unconsciously put the organs in such a position as will produce something like the pattern. In voice culture, to a great degree, we are the creatures of circumstances. We acquire the habit of using a certain peculiar intonation, or cadence, or movement which we often hear used. We have the English accent be-

cause we have always heard the English spoken, and we have, to a great degree, the composite accent and intonation of all those whom we have heard speak. Those who imitate dialect best are those whose lives have been thrown a great deal with those whose dialect they imitate, so in voice culture there is much that comes by the application of certain known principles, and much, too, that can only be learned under the instruction and by imitation of a good teacher. In voice culture we must first have a definite idea of the sound we wish to make before it can be produced with any degree of accuracy. To say to a class, "Give a perfectly rounded sound" always produces a rounded, open mouth in the pupil. We may think tone, pitch, inflection, or force—any phase of voice may—nay, must, first have a definite conception in the mind of its author for the purposes of vocal culture.

There is a great deal said about chest tones and throat tones to the utter confusion of the student. Let him have one definite idea in the beginning—that all voice is produced in the voice box or larynx—it may be controlled and molded in other parts of the body, but it is made in one place. When we utter all of the vowels on the same pitch and with the same force, why is it that they are not equally smooth and flexible? Not because of a difference in production, but the difference is made in the molding and in resonance. They all are made from the same stream of vocalization, as many kinds of pottery are made from one kind of clay. The reason they are different is that some are more obstructed in their flow than others. To test this, first pronounce the letter *o* and notice the little obstruction and effort in the mouth and throat. Then pronounce the letter *e* and note the difference. Then, as a rule, the mouth should be open, not broadly, but rather up and down, like the letter *o*. Let students practice contracting the mouth till the lips form an opening the shape and size of a crayon. Now give the sounds of *o*, *u*, and *a*,

holding the mouth in the same position for each. Then form the mouth for the purpose of making *o* and make *a* instead. Then prolong the letter *o* and change to *a* by simply a slight change of the tongue without any other change of the mouth or throat. Also open the throat. This can be done by throwing the jaw down and out and by plenty of exercise in the proper manner. This will give throat cavity and flexibility, which is peculiarly noticeable in song birds. Do not attempt to produce a voice that is foreign to you. Sometimes students spend much time in forcing the voice down to an habitual low pitch. Develop the kind of voice Nature has given you. There is more beauty in purity and flexibility than in any one degree of pitch. A naturally high voice may become more pleasant than a low growl. There is a great deal of fallacy on this point. Novels speak of the heroine's low, soft voice. A voice should be smooth and flexible, not too low nor too soft. It is our servant, we are not its slave. Depend upon this, you will accomplish greater results by the cultivation and use of the true voice Nature intended you should use. So if you have a tenor voice cultivate it, if a bass it is just as good, only belonging to another kind. It sounds well to speak of a low, smooth voice, but one who fails to be heard is hardly serving the purposes for which it was intended.

### HARMONY.

There are certain sounds that appeal to the ear in such a pleasing manner that we call their combined product music, just as there are objects which attract the eye and we call them beautiful. The reason they are beautiful to the eye is because they are harmonious in outline, symmetrical, with delicate blending of form and coloring. Hence in the harmony of outline and coloring depends what we term the beauty of an object. A pile of bricks and lumber and rubbish is not beautiful because these elements are

wanting and chaos is not pleasing to the eye. Now the ear is impressed in about the same manner; there are melodies, blending and harmonies of sound which please the ear, and these we call music. Sounds may be divided into two classes, noise and music. Perfect regularity of the number of vibrations in a sound together with smoothness in the sound waves will give us a musical tone. The howling of the wind is not musical because the pitch of the noise is constantly changing, making a circumflex. The growling of a dog is not musical for another reason, the sound waves are irregular in outline and come to the ear in a rough and broken condition.

In music our principal variety is produced by changes in pitch, by distinct steps, by difference in force, time, and the swell, but in speech we have all of these and something more. We have the inflected tones as well. Why is it there is one kind of voice for singing and another kind for speaking? Why do we not sing our various wants, likes, and dislikes? We have seen that music is the embodiment of harmony, that it is the beautiful of speech, and hence the function of music is to appeal to the sensibilities—to the emotional side of our nature. Now in speech we want all this and something more. We must appeal to man's every faculty. His intellect must be swayed and that is not the province of music. Hence in speech we must have strength as well as beauty, power as well as harmony, and thus we use the inflected tones as well. Sculpture, as a rule, aims at the beautiful, and this beauty corresponds to that harmony in sound which we call music. Now we may want a fine building ornamented by sculpture; this is beauty combined with the useful or strength, and this corresponds to speech. So while harmony is not the only feature to be considered in speech, yet it is a salient feature, and no aggregation of strength in speech can entirely take the place of harmony. The tympanum of the ear is affected in much the same manner as the retina of the eye.



What appeals to one person will not to another. One eye may be sensitive to delicacy of objects and so may one catch harmonies, subtleties, and distinctions in a sound that is a mere unmusical sensation or noise to another. But we shall find that as we study voice we shall also cultivate the ear. As the voice becomes quick to adapt and mold itself, as it gains in flexibility, so will the ear grow in its capacity to detect the subtle difference in all of these sounds. Some ears can detect a sound that is utter silence to another, and it is sure a cat can hear the delicate footfalls or minutest noises of a mouse, when the human ear would be closed to them. It is said of Blind Tom, the celebrated negro musician, that he would sit for hours enwrapped in melodies his fingers drew from the keys, so wonderful that others could not comprehend them, yet he reveled in them because he detected in them what to his ear was harmony and hence music. There is music of the spheres, only we cannot detect it. Perhaps they are only attuned to celestial ears, but certainly their motions would produce music and not noise, for their movements are regular and their machinery is so perfectly adjusted there is no discord nor want of tuning. The first great lesson which the student should learn is to make a small voice and make it well. The more voice is produced in a faulty manner the more the vocal machinery is disarranged and the more established will our incorrect habits become. Too much stress cannot be put upon this. Those students who use their voices to any great degree before the correct basis of voice production is established, will destroy timbre and flexibility of voice and gain nothing in real power, if, indeed, the throat or some of its organs are not permanently injured. The fault is this, the student frequently mistakes mere noise for power, and thus sacrifices quality to mere quantity. Let this be borne in mind then, the lighter voices, with all the delicacies of shading and touch, with their perfect timbre and variety, with their smoothness, flexibility, and blend-

ing, require infinitely more practice and control than mere noise, even as they mean infinitely more. Let this also be kept before the ambitious student, that the difference between the light sounds and the heavy ones is only one of degree, not of kind. The same inflections, the same shading, and the same timbre are found in the more forcible notes, they are only an enlargement of the others. As we have said heretofore, voice is a phase of muscular activity. Therefore the first thing to be accomplished is to establish correct habits of voice by allowing those muscles which should have no part in it to relax and take their normal condition while others should be cultivated until they take their proper place in the vocal mechanism.

### RESONATORS.

We should not get the idea that our voices are the mere product of the action of the breath upon the vocal bands. While the voice box is the seat of its origin, yet without the form and quality given by certain resonators it would be almost inaudible, and totally lacking in that quality which would in any degree resemble music. The chief resonator perhaps is the head, and incidentally the nose. When the tone is entirely devoid of this quality it loses its power, as well as its ring. Stretch the strings of a violin across an ordinary table just as they are stretched across a violin, draw the bow across them, and do we have the tones of the violin? Assuredly not. Then the value of the instrument does not lie in the strings alone. Some of the violins of the masters are worth their weight in gold. It takes as much of a master to make a violin as it does to play one. It is only when the strings of a violin are stretched above its own case, and the tone produced receives an increase of volume and resonance by the form and quality of the violin case, that we have the beautiful sounds of the violin. The chest is also a great

resonator of sound, and it is only by understanding the correct forms of breathing, applicable to speech and song, which we shall consider, that the most perfect resonance can be had. The mouth is also another of these sounding chambers. A full, flexible throat cavity serves to produce smoothness and ring to the voice, such as a tensioned throat can never give. Students should be guided by the teacher, yet never depend entirely upon him. They should investigate and test everything. Absolute confidence in the value of any given work is necessary to success, and the more the student investigates the more susceptible the ear will be to detect differences in the production or shading of sounds, and thus he will be better prepared to zealously enforce a correct principle, or to guard against a fallacy.

Resonance is a form of echo. The vibrations in the violin-box, produced by the vibration of the strings, is returned, or re-echoed from every part of this sounding chamber. When its return is regular and harmonious, the finest timbre of tone is produced. In making a violin proper wood must be used, and the exact formation attended to; so in the voice, the differences in timbre depend upon the quality, formation, and control of the vocal organs. The best timbre is where there are fewest overtones, and this occurs when the vocal machinery is correctly formed, and the sounds are made by a quick, firm, elastic touch.

A drum vibrates and sends back its minute echoes from its every part, these joining the primary tone give it additional volume and character. An echo is also a rebound, but it is when the sound is returned from a considerable distance, and forms no part of the original sound, but is a repetition of it. When the rebound returns in time to add volume to, and become a part of the original sound-waves we call it resonance, when it does not we name it echo. Echo is a shadow of a sound—a spirit that returns

to haunt the realms that the body which it represents inhabits.

### VARIETY IN SPEECH.

It has already been said that in music we move by steps, but in voice our principal variety is in the inflections. In their intensity, and combination, and shading they are almost infinite. We may speak for any length of time on only one or two notes, yet we shall have variety, because of cadences and inflections, force and stress. In music we range easily and quickly from "do" to "do." But in speech we are slower and more dignified in movement. When the voice changes pitch it usually does so gradually, and when the change is effected it usually dwells on the new plane for at least a sentence or two, and then, perhaps, returns at the same measured pace.

We speak more rapidly than we sing. In song we dwell upon the vowels, as they are the open sounds, and shun the consonants. In speech we utter the vowels rapidly, and are careful to distinctly utter the consonants as well. It takes a minister less time to give out his hymn than for his choir to sing it, but he is usually understood and they seldom are. Then, the difference between the voice in speech and song is not one of production, but rather one of movement.

### ENUNCIATION.

Of course, all vocal culture has for its ultimate end and object expression or enunciation. Very often graduates from schools of oratory fail to make themselves heard, and hence miss entirely the exact object toward which all their education should have tended. Our elocution will not amount to much if we are not understood, and to be understood rather requires correct management of the voice than mere volume. Articulation, clear and distinct, is an



absolute requisite of correct enunciation, for if the air waves are run together in a hopeless jumble, they will strike the ear in this condition and will confuse and annoy it. We may have a "chopped sea" of sound-waves as we may have of the waves of water. Then, too, the articulation or separation of the sound-waves for a small audience may not be sufficient for a larger one.

So, also, we must focus and project the tone properly. Now, the tone is such an intangible thing that it is difficult to tell the exact modifications of it in every instance. Some say, "focus the tone in the roof of the mouth," others say let it strike the upper front teeth. These are mere imaginary directions at best, and a better way is to focus it at the object to which we are speaking. If you have not this peculiar power of tone-placing, your speech will be smothered and labored. Then go to work and practice speaking to an object an hundred yards distant. If you have no such object, imagine one. And in public speaking be sure that the person nearest the door, or in the furthest corner, hears, and hears distinctly, without strain, for the ear by great effort may detect sounds as the eye by a strain may see distant objects. Take time on the words and between them. In speaking to a large audience, slightly raise the pitch and increase the amount of force. These qualities, carefully observed, will give us correct enunciation.

Pitch depends upon the number of vibrations produced per second. The reason vibration ceases to be sound when the number per second is very great or very small is because of the limit of our ear in sensitiveness and ability to detect them. Force depends upon the size or amplitude of the sound-waves, while timbre depends upon their formation and regularity.

## CONCLUSION.

Voice culture is not an end, but a means. Its purpose is the developing, enlarging, and disciplining of the mind's great vehicle of conveyance. Without this cultivation the mind may conceive and the voice, because of its want of variety, purity, and adaptability, may refuse to execute. The true idea is to so cultivate this instrument that it will correctly perform the duties imposed upon it by its master, the mind. We do not cultivate the voice that it may be admired, but that, like the carpenter's perfect tools, it may do its complete and exact work.

"Speak the speech, I pray you, \* \* \* trippingly on the tongue, but if you mouth it, as many of our players do, I had as lief the town crier spake my lines."

THE HUMAN VOICE,  
ITS PRODUCTION  
AND  
CULTIVATION.

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AN ESSAY

READ BEFORE THE CLASSES OF  
THE NATIONAL SCHOOL OF ELOCUTION AND ORATORY

APRIL 16TH, 1891,

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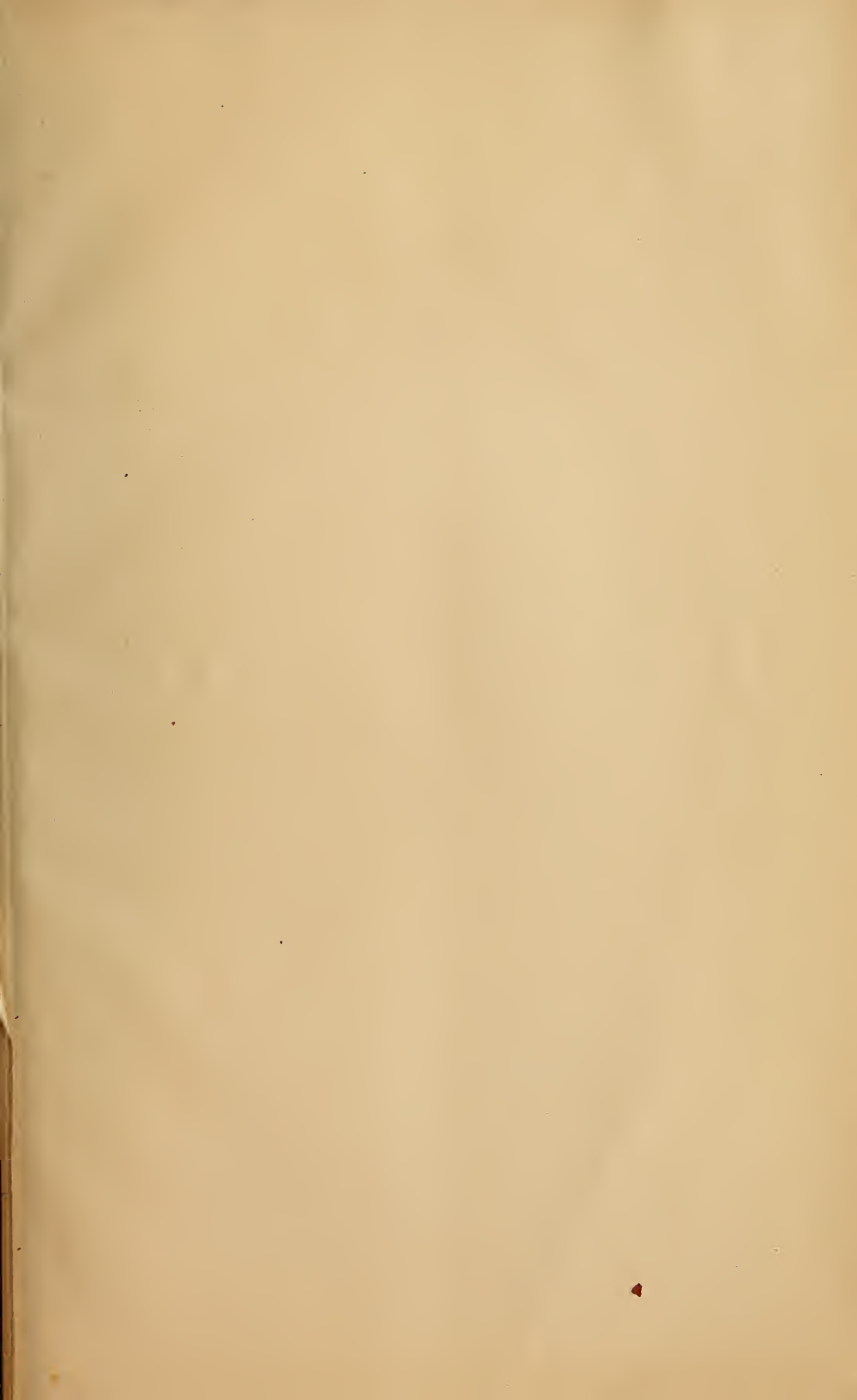
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